

### **REMARKS**

This application has been carefully considered in connection with the Office Action dated April 14, 2009. Reconsideration and allowance are respectfully requested in view of the following.

#### **Summary of Rejections**

Claims 1-5 and 7-25 were pending at the time of the Office Action.

Claims 1-5 and 7-25 were rejected under 35 USC § 103.

#### **Summary of Response**

Claim 6 was previously canceled.

Claims 1, 5, 7, 15, 16, 18, 19, and 24 were previously presented.

Claims 2-4, 8-14, 17, 20-23, and 25 remain as originally submitted.

Remarks and Arguments are provided below.

#### **Summary of Claims Pending**

Claims 1-5 and 7-25 are currently pending following this response.

**Applicant Initiated Interview**

Applicants thank Examiner John A. Anderson for his time and consideration of the arguments presented in the telephone interview on July 7, 2009. In the interview, Examiner Anderson further considered the applied art in view of the Applicants' arguments. Examiner Anderson indicated that a further search may be performed. A detailed discussion of the differences between the applied art and the claim limitations follows.

**Response to Rejections**

Bowman-Amuah in view of Daley does not teach or suggest streaming data conversion that extracts data from a first system, converts the data into a format compatible with a second system, and loads the converted data into the second system during normal operation of the first and second system. Streaming data conversion allows a data store of customer data to be converted from a legacy billing system to a new billing system with minimal system and customer outages. Rather than running sequentially as in a conventional batch process, the streaming data conversion processes disclosed in the pending application performs the extracting, converting, and loading of data generally in parallel. Typically, a batch conversion can require as many as 30 to 40 hours to complete. Access to the data stores holding the customer data is typically denied during the conversion process so that the data does not change during the process. If a customer requests access to billing data during the outage, it might not be possible to fulfill the request. Compared with the data set managed by batch conversion, the streaming data conversion blocks access to only a small number of

units of data during conversion, thus requests for other units of data can be fulfilled during conversion. Further, the smaller set of data managed at any one time by streaming conversion creates a smaller demand on computing systems. The computing load is spread out over a longer period compared to batch conversion and system spikes are prevented. Through the use of a continuous streaming process in which one work unit at a time is converted over a period of less than one minute each, the need for outages is reduced and the chances of a customer requesting billing information while the conversion is in progress are reduced.

Bowman-Amuah is directed to a system, method and article of manufacture for translating an object attribute to and from a database value. (Title) In general, Bowman-Amuah discloses a development architecture framework for constructing and maintaining application software. (Column 2, lines 30-65). Bowman-Amuah generally discloses a development architecture framework useful for software application batch processing, and certain implementations, such as object-oriented-type programming for converting object attributes to database values. (Column 192, lines 47-59). While Bowman-Amuah may disclose the words "extracts" and "translation," Bowman-Amuah does not disclose extractor and translator components as claimed that extract and translate the same unit of data.

Daley is directed to an operation support system for service creation and network provisioning for video dial tone networks. (Title) In general, Daley discloses a seamless and smooth approach for connecting video information users and video information providers to a video dial tone network by provisioning network resources and activating network services for use by the video information users and the video information

providers. (Column 4, lines 30-34) While Daley may disclose the phrase “normal operation,” Daley does not disclose performing an extraction of data from a first system, a translation of the same data, and a loading of the translated data into a second system during normal operation of the first and second systems as claimed.

Applicants submit that it does not appear that the claim as a whole has been considered because the evidence relied upon from the applied art seems to be based on individual words or phrases found in different contexts in multiple references.

These and other distinctions between the pending disclosure and the applied art will be discussed in greater detail in the analysis of the pending claims that follows.

### **Response to Rejections under Section 103**

#### **Claim 1:**

Claim 1 was rejected under 35 USC § 103(a) as being anticipated by Bowman-Amuah, U.S. Patent No. 6,529,909 (“Bowman-Amuah”) in view of Daley, U.S. Patent No. 5,650,994 (“Daley”).

I. Bowman-Amuah in view of Daley does not teach or suggest extracting data from a first system, converting the data into a format compatible with a second system, and loading the converted data into the second system during normal operation of the first and second system.

## Claim 1 recites:

an extractor component that extracts a unit of data from the first system; a translator component that converts the unit of data from a first data format compatible with the first system to a second data format compatible with the second system; and a loader component that loads the unit of data converted to the second data format into the second system, and the extractor, the translator, and loader components convert the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on data from the first system other than the unit of data from the first system during the conversion of the unit of data from the first system.

The Office Action admits that Bowman-Amuah does not disclose, "a loader component that loads the unit of data converted to the second data format into the second system, and the extractor, the translator, and loader components convert the unit of data during normal operation of the first and second systems." (Page 3) However, the Office Action cites Column 41, lines 40-50, of Daley as disclosing these limitations. (Pages 3-4) This cited section of Daley discloses:

In normal operation, the Level 1 gateway 108 requests establishment or tear down of specific connections through the ATM subnetwork 106. When the ATM switch(es) perform the requested connection function, reports thereof are provided to the PVC controller 248. The PVC controller in turn provides confirmation to the Level 1 Gateway 108. If necessary resources are not available when the Level 1 Gateway 108 requests a connection, the PVC controller 248 will so inform the Level 1 Gateway. (Emphasis added)

This section of Daley discloses that a gateway requests a sub-network to establish or tear down connections. Daley also discloses that the gateway receives a subscriber's request and a video information provider's acceptance of the subscriber's request, and translates the request and acceptance into a command to set up the desired communication session:

From the VIU perspective, a user will communicate with the network via the Level 1 Gateway 108 in order to select the VIP 116 for an IMTV session. In a network providing access to multiple IMTV service providers, the user wishing to establish an IMTV session identifies the provider of choice to the Level 1 Gateway 108 by inputting control signals to the user's DET, which supplies the appropriate signals upstream from the customer premises 126 to the Level 1 Gateway 108 via the corresponding LVAN 112 and the ATM backbone subnetwork 106. In response, the Level 1 Gateway 108 controls the broadband routing functionality of the network to establish a downstream broadband communication link and a signaling link between the provider and the user. (Column 24, lines 8-21)

The session agent function or application submodule of the Level 1 Gateway actually translates a subscriber's request to communicate with a particular VIP and that VIP's acceptance of the call from the subscriber into a command to the next level to take actions to set up the desired communication session. (Column 16, lines 7-12)

It appears that the Office Action may be attempting to interpret the gateway's translation of the subscriber request into a command as the claimed translation of the unit of data, and may be attempting to interpret the gateway's command to establish a connection as the claimed loading of the unit of data into the second system. Applicants respectfully traverse any such interpretation of the disclosure of Daley. Claim 1 requires that the extractor, the translator, and loader components convert the unit of data extracted during normal operation. While Daley may disclose the phrase, "normal operation," Daley does not teach or suggest any extractor component, much less an extractor component that functions during normal operation with the translator and loader components. Daley's gateway passively receives subscriber requests in contrast to the claimed extractor component which actively extracts a unit of data from the first system.

The Office Action relied on the following disclosure in Bowman-Amuah (Column 20, lines 25-34) to read on the extractor component recited in claim 1:

Frameworks are used to help practitioners understand what components may be required and how the components fit together. Based on the inventory of components and the description of their relationships, practitioners will select the necessary components for their design. An architect extracts components from one or more Frameworks to meet a specific set of user or application requirements. Once an architecture has been implemented it is often referred to as an architecture or an infrastructure. (Emphasis added)

As shown above, Bowman-Amuah merely discloses steps that an architect might take to meet a set of user or application requirements. As shown, the word “extracts” is disclosed. However, Bowman-Amuah does not disclose what components would be extracted or how such an extraction actually might be accomplished (e.g., manually, computer-assisted, etc.). Clearly, Bowman-Amuah’s disclosure of an architect extracting components from frameworks to meet user or application requirements does not teach or suggest an extractor component that extracts a unit of data from the first system during normal operations, as recited in claim 1.

Even if Bowman-Amuah taught or suggested an extractor component that extracts a unit of data from the first system, which it does not, the combination of Bowman-Amuah and Daley still would not teach or suggest that extractor, translator, and loader components convert a unit of data extracted during normal operation of the first and second systems. Bowman-Amuah does not disclose that any extractor component extracts units of data during normal operations because Bowman-Amuah describes an architect as extracting components from frameworks during a preliminary step in which a practitioner selects necessary components for their design, not during

Bowman-Amuah's normal operations when object attributes are being converted to and from database values based on client requests. Daley does not compensate for this deficiency.

Further, Bowman-Amuah does not disclose that the extracted framework components are translated into a format of a second system. The Office Action relied on disclosure in Bowman-Amuah on Column 44, line 65, to Column 45, line 1, which includes the word "translating," but has no bearing on the earlier disclosure of the extracted framework components. As required by the claim as a whole, the extractor, translator, and loader components all operate on the same unit of data.

Therefore, Bowman-Amuah in view of Daley does not teach or suggest extracting data from a first system, converting the data into a format compatible with a second system, and loading the converted data into the second system during normal operation of the first and second system. As noted above, streaming data conversion allows a data store of customer data to be converted from a legacy billing system to a new billing system with access blocked to only a small number of units of data during conversion, such that requests for other units of data can be fulfilled during conversion.

II. There is no motivation to combine Bowman-Amuah with Daley.

The Office Action alleges that "It would have been obvious for a person of ordinary skill in the art at the time of the was made to use Daley K in the device of Bowman-Amuah M.K. The motivation would have been to the PVC controller in turn provides confirmation to the Level 1 Gateway 108. [column 41 lines 40-50]."

Because Bowman-Amuah does not disclose or suggest either a permanent virtual circuit controller or a gateway for establishing a communication session for



videos on demand, no motivation would exist for Bowman-Amuah to have a permanent virtual circuit controller provide a confirmation to a gateway for establishing a communication session for videos on demand. Bowman-Amuah is directed to an application development architecture, whereas Daley is directed to a video dial tone network designed to provide broadcast and interactive broadband data to subscribers using various access technologies. Applicants respectfully request clarification regarding the motivation to combine Bowman-Amuah with Daley and how this combination would produce the claimed streaming conversion system.

Therefore, for at least the reasons established above in sections I and II, Applicants respectfully submit that independent claim 1 is not taught or suggested by Bowman-Amuah in view of Daley and respectfully request allowance of this claim.

**Claims Depending From Claim 1:**

Claims 2-5 were rejected under 35 USC § 103(a) as being unpatentable over Bowman-Amuah in view of Daley.

Dependent claims 2-5 depend directly or indirectly from independent claim 1 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in sections I and II above, Applicants respectfully submit that claims 2-5 are not taught or suggested by Bowman-Amuah in view of Daley and respectfully request allowance of these claims.

**Claim 7:**

Claim 7 was rejected under 35 USC § 103(a) as being unpatentable over Bowman-Amuah in view of Daley.

Claim 7 includes limitations substantially similar to the limitations discussed in sections I and II above. For example, claim 7 recites:

extracting a unit of data from a database associated with the first system; translating the unit of data from a first format accessible by the first system to a second format accessible by the second system; loading the translated unit of data into a database associated with the second system; and normally accessing data other than the unit of data from the first and second systems, wherein normally accessing comprises at least one other system accessing data other than the unit of data during the extraction, translation, and loading of the unit of data.

Accordingly, the arguments of Section I and II are hereby repeated for claim 7.

III. Bowman-Amuah in view of Daley does not teach or suggest loading a translated unit of data into a database.

Claim 7 recites, "extracting a unit of data from a database associated with the first system; translating the unit of data from a first format accessible by the first system to a second format accessible by the second system; loading the translated unit of data into a database associated with the second system."

As discussed above in section I, the combination of Bowman-Amuah and Daley does not disclose the claimed extracting, translating, and loading during normal operations. Furthermore, Applicants submit that neither Bowman-Amuah nor Daley disclose performing these steps between databases so as to extract data from one database and load the data into another database.

Therefore, for at least the reasons established above in sections I, II, and III Applicants respectfully submit that independent claim 7 is not taught or suggested by Bowman-Amuah in view of Daley and respectfully request allowance of this claim.

**Claims Depending From Claim 7:**

Claims 8-14 were rejected under 35 USC § 103(a) as being unpatentable over Bowman-Amuah in view of Daley.

Dependent claims 8-14 depend directly or indirectly from independent claim 7 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in sections I, II, and III above, Applicants respectfully submit that claims 8-14 are not anticipated by Bowman-Amuah in view of Daley and respectfully request allowance of these claims.

**Claim 15:**

Claim 15 was rejected under 35 USC § 103(a) as being unpatentable over Bowman-Amuah in view of Daley.

Claim 15 includes limitations substantially similar to the limitations discussed in sections I and II above. For example, claim 15 recites:

an extractor component that extracts a unit of data from the first system; a translator component that converts the unit of data from the first format compatible with the first system to the second format compatible with the second system; a loader component that loads the unit of data converted to the second format into the second system, and the extractor, the translator, and the loader components extract, convert, and load the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on a second unit of the data from the first system during the conversion of the unit of data from the first system.

Therefore, for at least the reasons established above in sections I and II, Applicants respectfully submit that independent claim 15 is not anticipated by Bowman-Amuah in view of Daley and respectfully request allowance of this claim.

**Claims Depending From Claim 15:**

Claims 16-25 were rejected under 35 USC § 103(a) as being unpatentable over Bowman-Amuah in view of Daley.

Dependent claims 16-25 depend directly or indirectly from independent claim 15 and incorporate all of the limitations thereof. Accordingly, for at least the reasons established in sections I and II above, Applicants respectfully submit that claims 16-25 are not anticipated by Bowman-Amuah in view of Daley and respectfully request allowance of these claims.

**Conclusion**

Applicants respectfully submit that the pending application is in condition for allowance for the reasons stated above. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, the Examiner is encouraged to telephone the undersigned at (972) 731-2288.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Respectfully submitted,

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